REMARKS

Claims 1, 4, 6, 8, 9 and 11-13 are pending in the present application. No additional claims fee is believed to be due.

Claim1 has been amended to more particularly define the invention. Support for the amendment is found at page 8, lines 23-33. It is believed this change does not involve any introduction of new matter. Consequently, entry of this change is believed to be in order and is respectfully requested.

Rejection Under 35 USC § 103(a) Over Fowler in View of Cao

Claims 1, 4, 6 and 8-9 have been rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent 6,268,196 issued to Fowler et al. (hereinafter referred to as "Fowler") in view of U.S. Patent 6,025,316 issued to Cao et al. (hereinafter referred to as "Cao"). According to MPEP § 2143, in order to establish a prima facie case of obviousness, three basic criteria must be met: (1) there must be some motivation or suggestion to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. Applicants submit that Fowler in view of Cao does not meet all three of these criteria with respect to newly amended Claim 1 and the balance of the claims that ultimately depend therefrom.

Newly amended Claim 1 discloses a laundry detergent and/or fabric care composition that is comprised by a polymer and a chemical entity. The chemical entity is itself comprised by two components: (1) a deposition aid having a high affinity for cellulose and (2) a benefit agent. See Abstract. Deposition aids are defined as any material which has a high affinity for cellulose. See p. 5, lines 15-16. Preferably, the deposition aid for the purpose of the present invention is the binding domain of an enzyme particularly the binding domain of a cellulase, hereinafter referred to as a cellulase binding domain. See p. 5, lines 26-33. The binding domain is isolated from the other components of the enzyme, such as its catalytic core, either by genetic engineering or through recombinant techniques. See p. 7, line 30, through p. 8, line 7. The benefit agent may be selected from perfumes, hygiene agents, insect control agents, etc. See p. 14, lines 17-24. The deposition aid and the benefit agent are covalently linked to one another via a linking region. See p. 8, line 26 through p. 9, line 2. The linking region is selected from a group of polymeric derivatives of polyethylene glycol, hereinafter referred to as "PEG". See p. 9, lines 1-9.

In contrast, Fowler relates to "[i]mproved methods of treating cellulose containing fabrics with cellulose comprising contacting the cellulose fabrics with truncated cellulase enzyme". See Abstract. Fowler defines cellulases as "...enzymes which hydrolyze cellulose..." which may be

"...produced by a number of microorganisms and comprise several different enzyme classifications including those identified as exo-cellobiohydrolases (CBH), endoglucanases (EG) and β-glucosidases (BG)." See Col. 2, lines 23-31. Fowler indicates that cellulases are comprised of at least three distinct separable regions: "Protein analysis of the cellobiohydrolases (CBHI and CBHII) and major endoglucanases (EGI and EGII) of T. longibrachiatum [T. longibrachiatum is also known as Trichoderma longibrachiatum and has previously been classified as Trichoderma reessei according to Col. 8, lines 60-64] has shown that a bifunctional organization exists in the form of [1] a catalytic core domain and a smaller [2] cellulose binding domain separated by a [3] linker or flexible hinge stretch of amino acids rich in proline and hydroxyamino acids." See Col. 3, lines 19-2. See also Col. 7, lines 51-56 which puts forth the same conclusion based upon gene analysis. "The catalytic core and the cellulose binding domain of a cellulase enzyme are believed to act together in a synergistic manner to effect efficient and often deleterious hydrolysis of cellulose fibers in a cellulose containing fabric." See Col. 11, lines 45-48. Thus Fowler excludes the cellulose binding domain from the enzymes used in the disclosed fabric treatment. Instead, Fowler "...specifically contemplates the use of truncated cellulase core, alone or in combination with additional cellulase components, to achieve excellent abrasion with reduced redeposition when compared to non-truncated cellulase." See Col. 20, lines 12-21. Moreover, Fowler defines "[t]he term 'truncated cellulase core' or 'truncated cellulase region'...[as] a peptide comprising the catalytic core domain of exo-cellobiohydrolase or endoglucanase, for example, EGI type, EGII type...or a derivative thereof that is capable of enzymatically cleaving cellulose polymers..." See Col. A12, lines 31-47. "Additionally, naturally occurring cellulase enzymes which lack a binding domain are contemplated as within the scope of the invention." See Col. 20, lines 12-21 "...[A] truncated cellulase core will not possess cellulose binding activity attributable to a cellulose binding domain. A truncated cellulase core is distinguished from a non-truncated cellulase which, in an intact form, possesses poor cellulose binding activity." See Col. 12, lines 38-42. Based upon these disclosures Fowler claims a method for contacting a cellulose containing fabric with an effective amount of truncated cellulase wherein said truncated cellulase lacks a cellulose binding domain.

Since Fowler specifically excludes the cellulose binding domains from the truncated cellulase it discloses for use in treating fabrics to confer desirable qualities, it does not teach or suggest every element of newly amended Claim 1 **which in contrast *does* require** that an enzyme binding domain, particularly the cellulose binding domains of the enzyme species listed, be linked to the benefit agents via a PEG derivative linker.

Applicants have established that the primary reference of Fowler is not properly applied to newly amended Claim 1 in the context suggested by the Office Action. Assuming arguendo that Fowler *could* be properly applied, Applicants note that Cao would still fail to resolve its

shortcomings. The Office Action itself notes that Fowler "does not specifically teach a laundry detergent composition comprising a benefit agent linked to a deposition aid via the specified linking regions as recited in the instant claim 1." The Office Action further notes that Cao in combination with Fowler suggests a benefit agent linked to a deposition aid via PEG polymer linkers disclosed in Claim 1. Applicants note that the PEG linkers disclosed by Cao are not "linkers" in the same sense as in newly amended Claim 1. Claim 1 now requires the benefit agent to be covalently linked to the deposition aid. In contrast, the PEG "linking" disclosed in Cao is non-specific hydrogen bonding. Cao states that PEG molecules "...serve to 'link' surfactant and/or enzyme molecules and the fiber surfaces of fabrics being washed, thereby carrying these actives into closer and more intimate contact with such surfaces...it is believed that these [PEG] polymers form hydrogen bonds by electron resonance involving oxygen atoms and/or hydroxyl groups present in the [PEG] linker polymer and the hydrogen present in the non-neutralized acidic functionalities of the surfactants and enzymes...in turn, [PEG] linker polymers containing oxygen in the polymer structure tend to similarly form hydrogen bonds with hydroxyl or other polar functional groups present in the fabric being washed..." See Col. 2, line 41 through Col. 3, line 3. Thus Cao does not teach or suggest PEG as a covalent linker of any entities, much less as covalent linker of a benefit agent and deposition aid as is disclosed by newly amended Claim 1. Accordingly, Applicants respectfully request withdrawal of the § 103(a) rejections as applied to newly amended Claim 1 and the balance of the claims which depend therefrom.

Rejection Under 35 USC § 103(a) Over Jones in View of Cao

Claims 1, 4, 6, 9 and 11-13 have been rejected under 35 USC § 103(a) as being unpatentable over International Publication WO 98/00500 (hereinafter referred to as "Jones") in view of U.S. Patent 6,025,316 issued to Cao et al. (hereinafter referred to as "Cao"). According to MPEP § 2143, in order to establish a prima facie case of obviousness, three basic criteria must be met: (1) there must be some motivation or suggestion to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. Applicants submit that Jones in view of Cao does not meet all three of these criteria with respect to newly amended Claim 1 and the balance of the claims that ultimately depend therefrom. Specifically, Jones and Cao when combined do not teach or suggest all of the limitations of newly amended Claim 1.

The Office Action itself points out that Jones does not teach the PEG derivative linkers of instant Claim 1: "Specifically regarding the linking region of claim 1, Jones et al. teach non amino acid linking agents as their preferred linking agents (such as 1-ethyl-3-(3-

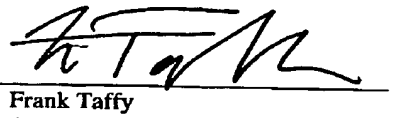
dimethylaminopropyl)) which shows a high affinity for the benefit agent and is covalently attached to the peptide/protein deposition agent...However, Jones et al. do not specifically teach a linking region that is a polyethylene glycol derivative polymer as recited by the instant claim." The Office Action relies on Cao et al. as it did earlier to "illustrate[s] that the PEG polymer linker not only can bind with conventional molecules such as surfactants and bring them close to the fabric surface, but can 'link' also unconventional complex molecules such as enzymes." However as noted above the PEG polymers of Cao are not covalently bound to the surfactant and/or enzyme molecules and the fiber surfaces of fabrics that they "link". But rather, the PEG molecules of Cao "link" them together via hydrogen bonding. See Col. 2, line 41 through Col. 3, line 3. Since Claim 1 as amended requires the benefit agent to be covalently linked to the deposition aid via a PEG derivative linker, Jones in view of Cao does not teach or suggest all of the limitations of Claim 1 as is required under MPEP § 2143. Therefore, Applicants respectfully request withdrawal of the § 103(a) rejections as applied to newly amended Claim 1 and the balance of the claims which depend therefrom.

Conclusion

In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejections under § 103(a). Early and favorable action in the case is respectfully requested.

Applicants have made an earnest effort to place their application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing, Applicants respectfully request reconsideration of this application, entry of the amendments presented herein, and allowance of Claims 1, 4, 6, 8, 9 and 11-13.

Respectfully submitted,

By 

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